



DAVID EVANS
AND ASSOCIATES INC.

September 2, 2009

Mr. Daniel Wilson
Marion County Facilities Management
100 High Street NE
Salem, OR 97308

SUBJECT: COURTHOUSE SQUARE QUARTERLY BUILDING-MONITORING PROGRAM

Dear Daniel:

The purpose of the quarterly building-monitoring program is to track changes in floor deflection by sampling floor deflections at discreet locations and to track changes in width of existing cracks located in the concrete walls in the stairwells and parking garage at quarterly intervals until floor strengthening/leveling and wall crack repairs are made.

Floor monitoring consists of measuring five spot elevations at predetermined locations on the third through fifth floors. Wall monitoring consists of installing crack monitors in the stairwell and recording changes in crack width.

We have completed the first floor survey of the quarterly monitoring program, which will function as a benchmark for comparison with future surveys. We have found that there were notable changes in measured slab deflections at two out of the fifteen locations surveyed (see attached floor plans) since the last completed survey. The notable areas are the mid-span floor deflections in room 3273, which showed a 0.7" potential deflection increase and room 5273, which showed a 0.5" potential deflection increase in the last nine months. These comparisons are not entirely accurate since the exact locations of the points surveyed in November 2008 were not recorded. We have recorded the exact location of each spot elevation in this first quarterly monitoring survey, which will provide accurate comparisons between future surveys. We installed ten crack monitors today throughout the stairwells and basement on existing cracks on the concrete walls. Our first readings will be in November 2009 to determine if the cracks are growing and by how much.

Based on the information obtained thus far the PT floor slabs may still be shortening, causing more deflection. Occupants in the building have recently reported "continual signs of movement in the ceiling grid on the fourth floor BOC area and new large cracks in the gypsum board on the fifth floor between rooms 5271 and 5170." The cause of these issues is increased slab deflection and/or residual internal stresses in non-structural components that are still being relieved.

It is still in DEA's professional opinion at this time that the building is safe to occupy until the strengthening/leveling repairs are completed. Although, the ultimate strength of the slabs is not affected by the current slab deflection, we still recommend that these repairs be completed as soon as possible to meet

Mr. Daniel Wilson
September 2, 2009
Page 2



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current code requirements. We will continue the building-monitoring program and provide the results and our recommendations each quarter.

Sincerely,

DAVID EVANS AND ASSOCIATES, INC.



EXPIRATION DATE: 6-30-2010

Jeremy Williams, P.E.

Project Engineer

Attachments/Enclosures: Quarterly Monitoring Survey Results (3rd, 4th, and 5th Floors)

Initials: jgw

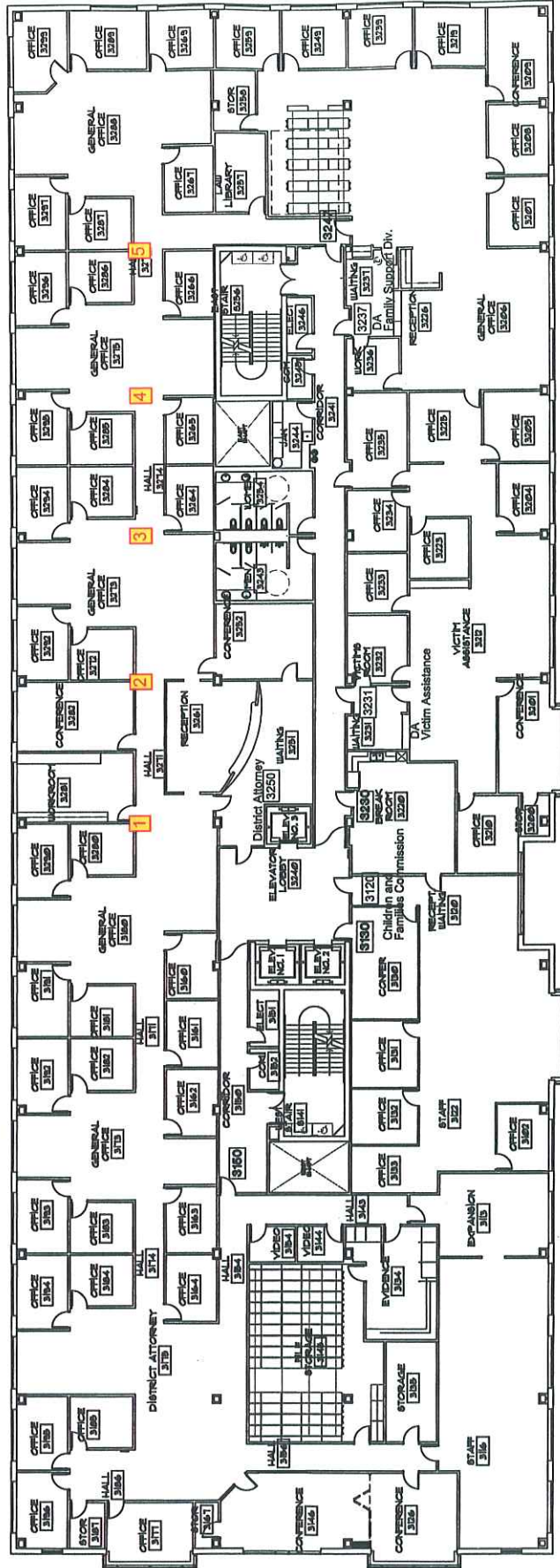
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Project Number: [MARN0042]



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☒ Indicates Location of Spot Elevation Survey Number for
Quarterly Building-Monitoring Program



3rd Floor Location	Nov. 24, 08 Deflection (in.)	Aug. 31, 09 Deflection (in.)	Δ Deflection (in.)
1	1.3	1.4	0.1
2	1.9	2.1	0.2
3	1.4	2.1	0.7
4	2.8	2.4	-0.4
5	2.1	2.1	0

Note: Positive Δ deflection indicates increase in deflection



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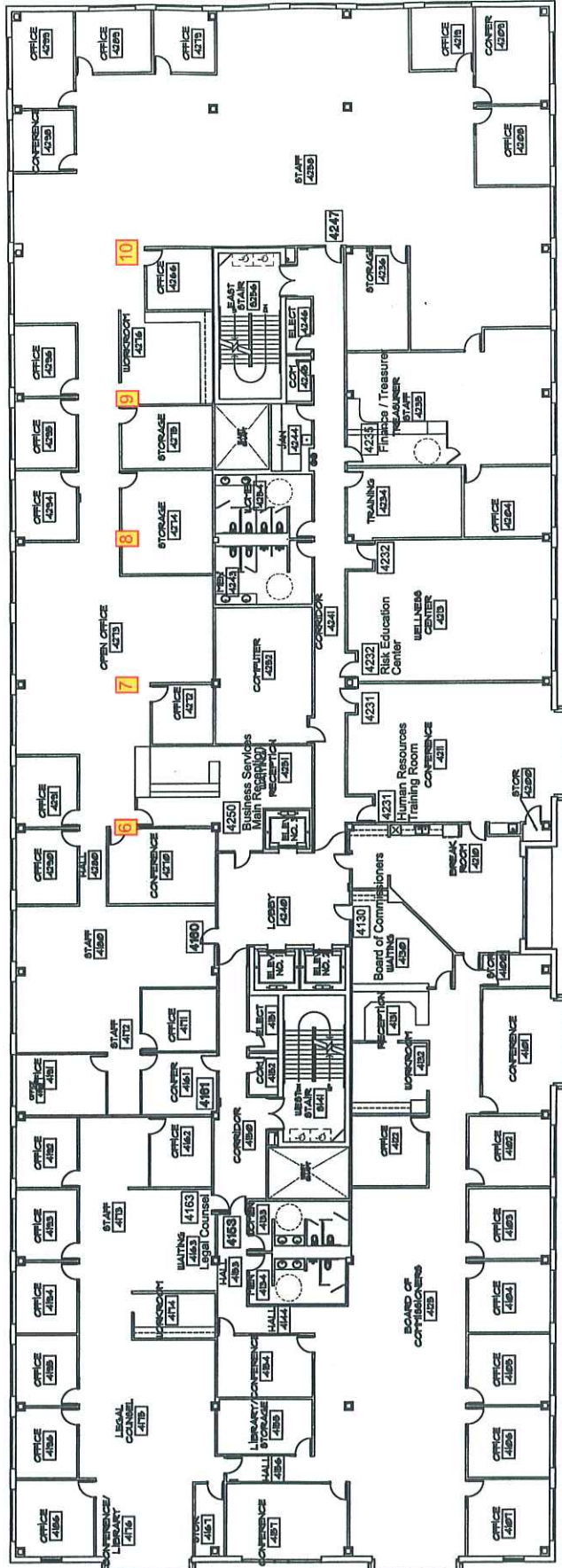
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THIRD FLOOR
FILE NAME: 13ddg\cvt\cs3
BLDG PLAN DATE:

CS-3



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Indicates Location of Spot Elevation Survey Number for
Quarterly Building-Monitoring Program



4th Floor Location	Nov. 24, 08 Deflection (in.)	Aug. 31, 09 Deflection (in.)	Δ Deflection (in.)
6	1.3	1.2	-0.1
7	1.4	1.3	-0.1
8	1.5	1.7	0.2
9	2.2	2.2	0
10	2	1.5	-0.5

Note: Positive Δ deflection indicates increase in deflection



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FACILITY:
COURTHOUSE SQUARE
FOURTH FLOOR
FILE NAME:
CS4.dwg

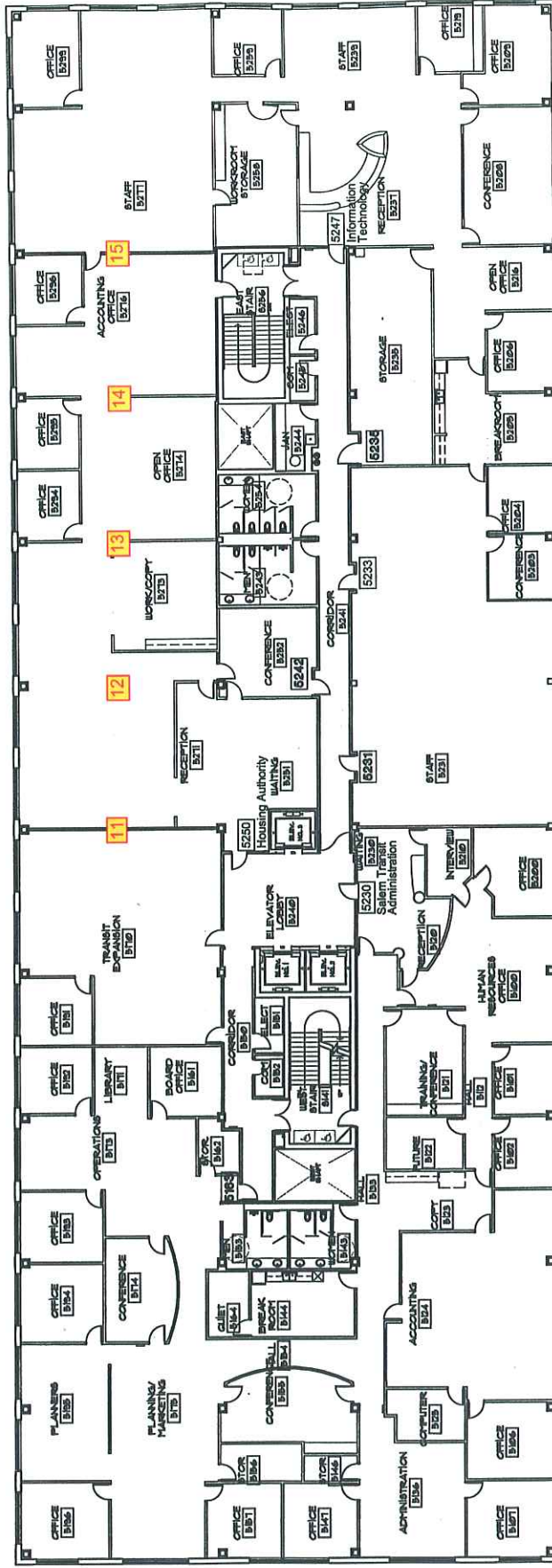
BLDG PLAN DATE:

CS-4



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X Indicates Location of Spot Elevation Survey Number for
Quarterly Building-Monitoring Program



5th Floor Location	Nov. 24, 08 Deflection (in.)	Aug. 31, 09 Deflection (in.)	Δ Deflection (in.)
11	1.9	2	0.1
12	2.2	2.3	0.1
13	1.7	2.2	0.5
14	3.2	3.5	0.3
15	2.9	2.5	-0.4

Note: Positive Δ deflection indicates increase in deflection

SCALE
0
5
20



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FACILITY:
COURTHOUSE SQUARE
FIFTH FLOOR
FILE NAME:
CSS

BLDG PLAN DATE:

CS-5